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OCT 19 2005

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**U.S. Environmental Protection Agency, Region VIII**  
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**Denver, Colorado 80202-2405**

**Dear Gentlemen:**

Enclosed please find the Rocky Flats Cleanup Agreement (RFCA) Quarterly Progress Report for the Fourth Quarter of Fiscal Year 2005. The report covers activities during the period July through September 2005, presenting the progress made toward completion of activities covered under RFCA, and is submitted pursuant to RFCA Paragraphs 122 and 263.

Please call me at (303) 966-6246 if you have any questions or comments regarding this report. Thank you.

Sincerely,

**John J. Rampe, Director**  
**RFPO Closure Project Management**


## Enclosure

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COR. CONTROL	X	X
ADMN. RECORD	X	X

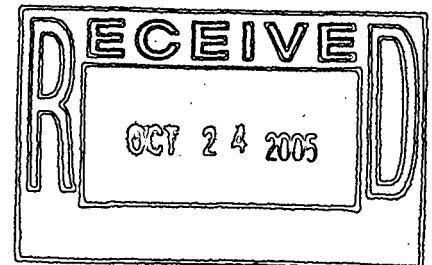
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10/23/05   
Date By

Ref Ltr. #

DOE ORDER #

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**ADMIN RECORD**

SW-A-005158

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**QUARTERLY STATUS REPORT**  
**ROCKY FLATS CLEANUP AGREEMENT IMPLEMENTATION**  
**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE**  
**FOURTH QUARTER FISCAL YEAR 2005**

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## **1.0 INTRODUCTION**

Pursuant to paragraphs 122 and 263 of the Rocky Flats Cleanup Agreement (RFCA or Agreement), this quarterly status report presents the progress toward implementation of activities covered under the Agreement. The RFCA is a legally binding agreement between the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the Colorado Department of Public Health and Environment (CDPHE) to accomplish required cleanup of radionuclide and hazardous substance contamination at and from the Rocky Flats Environmental Technology Site (RFETS). For the purposes of this report, the term, the Site, refers to both DOE and the Kaiser-Hill Company, L.L.C. (Kaiser-Hill).

This report describes activities that occurred from July 2005 through September 2005 (referred to as the fourth quarter of fiscal year [FY] 05). The sections of this report are organized into the following topics: (1) Introduction; (2) Site-wide Activities Implementing RFCA and Supporting RFETS Closure; (3) RFETS Closure Projects; and (4) Water Management.

## **2.0 SITE-WIDE ACTIVITIES IMPLEMENTING RFCA AND SUPPORTING RFETS CLOSURE**

### **2.1 Integrated Monitoring Plan Update**

Following release of the final FY05 Integrated Monitoring Plan (IMP) during the previous quarter, Kaiser-Hill and DOE continued to work with the other RFCA Parties and the community representatives to discuss and review final configurations for some of the monitoring locations, and to hone the decision rules that would be applied during the period between declaration of physical completion and finalization of the Corrective Action Decision/Record of Decision (CAD/ROD). This effort resulted in a revised IMP that was published on September 27, 2005. The plan continues to describe the monitoring that is being performed in FY05 and the network configurations and sampling schedules, but those configurations and schedules have been slightly modified to accommodate the final configuration of RFETS, particularly for surface water, and the monitoring requirements in the Present Landfill Interim Measure/Interim Remedial Action (IM/IRA) and the Original Landfill IM/IRA, for groundwater and surface water, that had not been finalized when the FY05 IMP was released.

### **2.2 Draft Remedial Investigation and Feasibility Study Report**

RFCA paragraph 83 states “[f]ollowing implementation of all planned accelerated actions, CDPHE and EPA shall evaluate the Site conditions and render final remedial/corrective action decisions for each operable unit.” The RFCA Parties have stated that final remedial/corrective action decisions will be made in a final CAD/ROD. To complete this process, the RFCA Parties developed a Final Work Plan for the Development of the Remedial Investigation and Feasibility Study Report (Work Plan) in March 2002. When approved by the regulators, the Remedial Investigation/Feasibility Study Report (RI/FS Report) will be the basis for development of a

Proposed Plan that describes the preferred proposed final remedy for RFETS. The Proposed Plan is the basis for the final CAD/ROD. DOE submitted the draft RI/FS Report to CDPHE and EPA on October 11, 2005.

### **3.0 RFETS CLOSURE PROJECTS**

RFETS closure activities conducted during the fourth quarter of FY05 included: (1) Industrial Area (IA) Operable Unit (OU), Building (B) 771; (2) IA OU, B776/777; (3) IA OU, B371/374; (4) IA OU, B707; and (5) Remediation, Industrial & Site Services Project (RISS).

#### **3.1 IA OU, B771 Closure Project**

CDPHE approved the B771 Closure Project Closeout Report on September 9, 2005.

#### **3.2 IA OU, B776/777 Closure Project**

DOE submitted the B776/777 Closure Project Closeout Report to CDPHE on July 26, 2005.

#### **3.3 IA OU, B371/374 Closure Project**

The B371/374 Closure Project DOP was approved by CDPHE on March 29, 2001. As of June 30, 2005, five field modifications to the DOP have been approved. During the fourth quarter of FY05, the B371/374 Closure Project Team conducted the following activities:

1. Completed Phase V demolition and load out on August 16, 2005.
2. Completed Phase IV demolition and load out on September 12, 2005
3. Completed and transmitted the B371 Closeout Report to DOE on September 22, 2005.
4. DOE submitted the B371 Closeout Report to CDPHE on September 29, 2005.

#### **3.4 IA OU, B707 Closure Project**

DOE submitted the B707 Closure Project Closeout Report to CDPHE on June 20, 2005.

#### **3.5 Remediation, Industrial & Site Services Project**

RISS activities supporting RFETS closure during the fourth quarter of FY05 include decontamination and decommissioning (D&D) as well as environmental restoration (ER).

### **3.5.1 Decontamination and Decommissioning**

During the fourth quarter of FY05, the RISS Closure Project Team conducted the following activities:

1. Demolished all remaining facilities, including demolition and load out of B371, the last remaining plutonium facility.
2. Completed the demolition and load out of the 750 Pad along with Tents 4, 5, 6, and 12.
3. Completed the demolition and removal of the last 14 remaining storage tanks including 215B – the Domestic Water Storage Tank.
4. Terminated the Raw Water System and completed the removal of the T124G Pump Skid.
5. Completed all remaining Aqueous Waste Treatment System shipments from RFETS.
6. Completed the removal of the 115 kV electrical transmission system by removing the remaining 27,058 feet of the 30,800 total feet.
7. Completed the removal of all above ground steam lines for a total of 20,150 lineal feet.
8. Completed the removal/disposition of the water distribution system by removing the remaining 25,347 of the 84,412 total feet.
9. Completed removal of all RFETS asphalt by removing the remaining 1,397,261 square feet of the 6,720,797 total square feet.
10. Completed final land configuration and revegetation on an additional 126 acres for a total of 443 of 460 total RFETS acres.
11. Completed closure/physical completion of 20 additional Sectors for a total of 28 of 33 Sectors.
12. Completed all punch list items and received DOE approval for 22 of the total 33 Sectors.

During October 2005, RISS completed the remainder of the final land configuration and revegetation activities; completed closure of the remaining 5 Sectors; and obtained DOE approval for completed punch list items for the remaining 11 Sectors.

### **3.5.2 Environmental Restoration**

ER activities implementing RFCA and supporting closure during the fourth quarter of FY05 included: (1) IA OU, Individual Hazardous Substance Site (IHSS) Group 700-3; (2) Buffer Zone (BZ) OU, IHSS Group NE-1; (3) IA OU, IHSS Group 000-2; (4) IA OU, IHSS Group 000-3; (5) IA OU, IHSS Group 000-4; (6) BZ OU, IHSS Group 900-11, (7) BZ OU, IHSS Group 000-5

(Present Landfill) and IA OU, IHSS Group SW-2 (Original Landfill); and (8) status of ER documents.

### **3.5.2.1 IA OU, IHSS Group 700-3**

IHSS Group 700-3 consists of Under Building Contamination (UBC) sites 776, 777 and 778 as well as the portion of the Original Process Waste Lines (OPWL) (IHSS 000-121) within the IHSS Group, including Tank 18. Accelerated action activities at IHSS Group 700-3 were planned and executed in accordance with the IA Sampling and Analysis Plan (IASAP), IASAP Addendum #IA-03-04, the ER RFCA Standard Operating Protocol (RSOP) for Routine Soil Remediation (ER RSOP) Modification 1, and ER RSOP Notification #04-04. Activities included soil characterization and removal. Also, the B776 entrance to the tunnel leading to B771 was crushed and grouted, and a bentonite cutoff wall was placed in front of the tunnel leading to B771 to prevent the flow of groundwater through the tunnel toward B771. Based on the results of the accelerated action characterization, approximately 6,400 cubic yards of contaminated soil were removed. All excavations were backfilled, and remediated areas were graded.

Residual contaminant activities and concentrations in surface and subsurface soil are less than RFCA wildlife refuge worker (WRW) action levels (ALs), with the following exceptions:

- An area in the northwestern corner of UBC 776 associated with a pipe chase;
- The excavation area associated with the removal of the elevator shaft;
- The excavation area associated with the removal of the B776/777 basement, C-Pit, and D-Pit;
- A small area associated with the removal of OPWL north of UBC 776;
- A small area in the southwestern corner of UBC 776; and
- A small area in the western portion of UBC 778.

All residual radionuclide activities greater than WRW soil ALs are at depths greater than 3 feet (ft) below final grade and less than 1 nanocurie per gram (nCi/g), or slightly greater than 1 nCi/g (less than 3 nCi/g) but at a depth greater than 6 ft below final grade, in compliance with RFCA.

The regulatory agencies approved the Closeout Report on October 12, 2005.

### **3.5.2.2 BZ OU, IHSS Group NE-1**

IHSS Group NE-1 consists of the A-Series, B-Series, and C-Series Ponds. Pond B-1 (IHSS 142.5), Pond B-2 (IHSS 142.6), Pond B-3 (IHSS 142.7), Ponds B-1, B-2, and B-3 were remediated and the Final Closeout Report for IHSS Group NE-1 (Ponds B-1 [IHSS NE-142.5], B-2 [IHSS NW-142.6], and B-3 [IHSS NE-142.7]) was approved by EPA on May 12, 2005. Pond A-1 (IHSS 142.1) Pond A-2 (IHSS 142.2), Pond A-3 (IHSS 142.3), Pond A-4 (IHSS 142.4)

Pond A-5 (IHSS 142.5), Pond B-4 (IHSS 142.8), Pond B-5 (IHSS 142.9), Pond C-2 (IHSS SE-142.11) were evaluated and sampled in FY05. Pond C-1 (IHSS 142.10), which received NFAA status in 2004, was evaluated, but not sampled.

Characterization data was collected in accordance with the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) Work Plan for the Walnut Creek Priority Drainage, OU 6; the IABZSAP; Comprehensive Risk Assessment SAP Addendum #05-01 – Phase 2 Targeted Sampling; and IABZSAP Addendum #IABZ05-06. Results were compared to RFCA WRW soil ALs to determine whether an accelerated action was necessary. Additionally, because these IHSSs include ponds, which are of ecological interest, an ecological screening was also conducted. The ecological screen was used to determine whether an accelerated action was required at these IHSSs because of potential impacts to ecological receptors. The results of the WRW soil AL comparison and the ecological screen indicate that no accelerated action is required. The regulatory agencies are reviewing the Data Summary Report for IHSS Group NE-1.

### **3.5.2.3 IA OU, IHSS Group 000-2**

IHSS Group 000-2 consists of the OPWL system. The OPWL system was a network of underground pipelines and 62 tanks, in 40 tank locations, used to transport and temporarily store aqueous chemical and radioactive process wastes. The OPWL was placed in service during 1952, with additions and repairs made to the system through 1975. Numerous leaks are known or suspected to have occurred throughout the system.

Characterization results and accelerated actions for specific portions of the OPWL system are presented the Closeout Report for IHSS Group 000-2 as well as in individual closeout and data summary reports for IHSS Groups 000-1; 100-1, 100-4, 400-3, 400-8, 500-3, 700-2, 700-3, 700-4, 700-7, 800-1, 800-2, 800-3, 800-4, 800-5, 800-6, and NE-1.

The OPWL system was characterized extensively as part of the accelerated actions conducted at IHSS Group 000-2 and other IHSS Groups listed above. Sampling targets included known and suspected leaks along OPWL, OPWL tanks and valve pits, and major OPWL joints. In addition, to ensure comprehensive sampling coverage, line segments not sampled based on specific targets were sampled at 100-ft intervals. Samples were analyzed for radionuclides, metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), nitrate/nitrite, polychlorinated biphenyl (PCBs), pesticides, herbicides, and/or miscellaneous other analytes depending on specific targets and related historical and process knowledge.

Based on characterization results, soil was removed from some areas under and adjacent to the OPWL system, and confirmation samples were collected to ensure that residual activities and concentrations were less than RFCA WRW soil ALs. As described below, some areas were not remediated based on RFCA and the Subsurface Soil Risk Screen (SSRS). There are 11 sampling locations containing residual contaminants at activities and concentrations greater than RFCA WRW soil ALs in subsurface soil.



- BV38-002 – the benzo(a)pyrene concentration exceeds the WRW soil AL but at a depth below 6 inches from the ground surface (at 10 ft below ground surface [bgs]).
- BW38-004, CI46-001, CJ46-DR01 and CF33-010 – the arsenic concentrations exceed the WRW soil AL but at depths below 6 inches from the ground surface (at 4.5, 3.5, 7.5 and 5.0 ft bgs, respectively).
- CG48-008 and CG46-009 – americium-241 and plutonium-239/240 activities exceed the WRW soil AL but at depths greater than 6 ft below final grade.
- CH47-051, CJ46-000, CJ46-002 and CQ44-003 – plutonium-239/240 activities exceed the WRW soil AL but at depths greater than 6 ft below final grade (at 10, 11, 11 and 12 ft bgs, respectively).

In addition, at Sampling Locations CJ48-000 and CJ48-001, arsenic concentrations (at 36.3 and 31.1 mg/kg, respectively) in surface soil exceed the WRW soil AL. Soil removal at these area was not required because the concentrations were less than the 1996 RFCA Tier I soil ALs.

Site-wide, approximately 17,000 ft of OPWL were excavated and removed. Approximately 14,700 ft of OPWL were grouted and left in place. OPWL associated with buildings were dispositioned under other IHSS Group accelerated actions. Remaining OPWL were dispositioned as part of the IHSS Group 000-2 project in accordance with ER RSOP Notification #03-14. Approximately 5,300 ft of OPWL were excavated and removed as part of the IHSS Group 000-2 accelerated action. All remaining OPWL are greater than 3 ft below final grade, and all remaining pipeline ends were grouted. All OPWL excavations were backfilled with clean onsite soil, regraded and revegetated.

All of the manways and valve pits (29 total) were completely removed as part of the IHSS Group 000-2 project. All OPWL tanks were removed prior to building demolition, during building demolition, or as part of an ER removal action, with two exceptions. Tanks 36 and 37 were sumps in the B771 Annex located 3.5 ft below final grade. These tanks were decontaminated, left in place, and backfilled with soil.

The regulatory agencies approved the Closeout Report on October 6, 2005.

#### **3.5.2.4 IA OU, IHSS Group 000-3**

IHSS Group 000-3 consists of the storm drains (potential area of concern [PAC] 000-505). The storm drains provided drainage from roads, parking lots, and other areas. The drains discharged into the creeks and drainages north and south of RFETS. Some footing drains from buildings also discharged to storm drains. The storm drains were designed to convey surface water away from RFETS, but unplanned accidental discharges to the system occurred. The total linear feet of storm drains in PAC 000-505 measures 50,975 ft.

There are eight specific contaminant release areas associated with PAC 000-505, many of which are separate IHSSs or PACs within other IHSS Groups. These contaminant release areas were dispositioned in accordance with RFCA.

Storm drains were disrupted, removed or retained for use after RFETS closure. For the most part, storm drains were removed unless they were very deep or removal presented slope stability problems. Storm drains ranged from 1.5 to 45 ft below the surface. Approximately 45,475 ft of storm drains were removed and approximately 5,500 ft of the storm drains remain in place to convey flows to North Walnut Creek via Functional Channel 3. Storm drains left in place were flow filled or grouted except for storm drain associated with Functional Channel 2. Approximately 210 ft of this storm drain remains.

All manholes and catch basins within 3 ft of the surface were removed. Manholes at a depth of 3 ft below the surface were flow filled. Grates and associated rings were removed to a depth of 3 ft below the surface and the remaining structure was flow filled.

The regulatory agencies approved the Closeout Report on October 6, 2005.

#### **3.5.2.5 IA OU, IHSS Group 000-4**

IHSS Group 000-4 consists of the New Process Waste Lines (NPWL) network. The NPWL was a network of double-contained underground and aboveground pipelines and tanks used to transport liquid waste streams to B374, Waste Treatment Operations. Approximately 21,500 ft of NPWL and 20 valve vaults existed at RFETS. For the most part, the NPWL system replaced the OPWL system (PAC 000-121), which was installed in 1952. Some of the OPWL was converted to NPWL. The NPWL transported a variety of waste streams and included laundry water, nonradioactive and chemical laboratory waste, uranium and beryllium waste, americium and plutonium waste, PCBs, Solar Evaporation Pond water, incidental water, nitrate waste from B774, and utilities waste. Specific portions of the NPWL system are described in the Closeout Report for IHSS Group 000-4 (NPWL) and other PAC writeups, including 000-101, 100-148, 100-602, 100-611, 300-186 and 800-1200.

The NPWL system was a RCRA-permitted unit, and portions were cleaned and closed in accordance with approved RCRA closure description documents and the RFETS RCRA Part B Permit (CO-097-05-03-01), Part X, Closure. Closure of the unit is described in the Closure Summary Report for the 700/800 Process Waste Transfer System, RCRA Unit 374.3 and the Closure Summary Report for Partial Closure of RCRA Unit 374.3 – 400 Area Process Waste Transfer System.

Accelerated action characterization and removal activities within PAC 000-504 were planned and executed in accordance with the IASAP, the ER RSOP, ER RSOP Notification #05-01, and the IABZSAP. Soil sampling targeting NPWL and locations near NPWL was conducted from January 2002 to July 2005. A total of 151 locations were sampled to target valve vaults during removal, breaks in the pipeline containment, stained soil, pipe joints, and sections of NPWL that could not be clean-closed under the RFETS RCRA Part B Permit. NPWL that were clean-closed

under the Part B Permit did not require soil sampling. Samples were analyzed for radionuclides, metals, VOCs, SVOCs, nitrate and/or total recoverable petroleum hydrocarbons depending on specific targets and related historical and process knowledge. Only two soil sampling locations contained contaminants at activities or concentrations greater than RFCA WRW soil ALs.

Characterization results and accelerated actions for specific portions of the NPWL system are presented the Closeout Report for IHSS Group 000-4 as well as in individual closeout and data summary reports for IHSS Groups 000-1, 000-2, 100-4, 300-4, 400-7, 500-1, 500-3, 700-2, 700-3, 700-7, 700-10, 800-1, 800-3, 800-5, and 800-6.

Approximately 15,300 ft of NPWL were removed, and 6,200 ft of NPWL were clean closed and left in place. Twenty valve vaults were part of the NPWL network. Six valve vaults were completely removed, three valve vaults were partially excavated and flow filled, and eleven valve vaults were partially excavated and backfilled with soil. The 3 valve vaults that were flow filled contained residual low-level radioactive contamination. The 11 valve vaults that were backfilled with soil met the unrestricted release criteria.

Portions of the NPWL were removed as part of accelerated actions under other IHSS Groups, as listed below.

- The aboveground NPWL that were present south of the Solar Evaporation Ponds (IHSS Group 000-1) and transferred waste from B910 to B774 were removed in 2003.
- Two NPWL sections located west of B865 (IHSS Group 800-1) were tapped and drained, filled with epoxy, and removed. These sections were packaged and sent off-site for disposal as low-level mixed waste. The northernmost line was removed up to Valve Vault 6, and all of the line to the B889 area was removed (there was no remaining end to grout).
- NPWL from Valve Vault 2 to B883 and from Valve Vault 2 to Valve Vault 1 (IHSS Group 800-3) were removed. NPWL from Valve Vault 2 to Valve Vault 3 were not removed, but were clean-closed in accordance with the RCRA Part B permit. Valve Vault 2 was removed to greater than 4 ft below ground surface and grouted.
- An 8-ft section of metal housing around the NPWL adjacent to B889 (IHSS Group 800-6) was removed. The remaining line consists of a high-density polyethylene (HDPE) line in which the actual waste line resides. The waste line is PVC pipe. The waste line was capped, and the space between the waste line and the HDPE line was filled with grout.

The regulatory agencies approved the Closeout Report on October 6, 2005.

#### **3.5.2.6 BZ OU, IHSS Group 900-11**

IHSS Group 900-11 consists of the 903 Pad and Lip Area. Two independent verification surveys were conducted in and around the 903 Pad and Lip Area. Results of the first survey indicated that there were 6 locations with plutonium-239/240 activities greater than 50 picocuries per gram (pCi/g). Six inches of soil was removed from each location and confirmation samples were

collected. Results of the confirmation sampling indicated that all plutonium-239/240 activities were less than 50 pCi/g.

A second verification survey, conducted by DOE using a field instrument for the detection of low-energy radiation (FIDLER) indicated 18 locations with survey results greater than 50 pCi/g. Six inches of soil was removed from each location and confirmation samples were collected. Results of the confirmation sampling indicated that all plutonium-239/240 activities were less than 50 pCi/g.

**3.5.2.7 BZ OU, IHSS Group 000-5 (Present Landfill) and IA OU, IHSS Group SW-2 (Original Landfill)**

**IHSS Group 000-5 (Present Landfill)**

The Present Landfill IM/IRA decision document was approved by CDPHE and EPA on August 23, 2004. Construction of the accelerated action is now complete and the draft Construction Certification Report was submitted to the agencies on May 23, 2005, for their review.

**IHSS Group SW-2 (Original Landfill)**

The Original Landfill IM/IRA was approved by CDPHE and EPA on April 28, 2005. Construction activities were started on May 13, 2005 and were completed in September 2005. The draft Construction Certification Report was submitted to the agencies in September 2005, for their review.

**3.5.2.8 Status of ER Documents**

Table 1 lists the status of ER Documents from July 1, 2005 through October 13, 2005.

Table 1. Status of ER Documents

IHSS Groups	Status	Date to Agencies	Approval Date
<b>Closeout Reports</b>			
IHSS Group 000-2	Approved	7/28/2005	10/6/2005
IHSS Group 000-3	Approved	7/26/2005	10/6/2005
IHSS Group 000-4	Approved	8/9/2005	10/6/2005
IHSS Group 700-3 (UBCs)	Approved	8/16/2005	10/12/2005
IHSS Group NE-1 Ponds	At Regulatory Agencies	9/1/2005	
<b>Other</b>			
Original Landfill Closure Report	At Regulatory Agencies	9/26/2005	
Present Landfill Closure Report	At Regulatory Agencies	5/23/2005	
SW056 Pipeline ER RSOP Notification	At Regulatory Agencies	10/3/2005	

#### 4.0 WATER MANAGEMENT

Water management activities during the fourth quarter of FY05 included: (1) Watershed Improvements; (2) Surface Water Management; (3) Surface Water Monitoring; and (4) Groundwater Monitoring.

##### 4.1 Watershed Improvements

Dam activities completed during the fourth quarter of FY05 included installation of the Pond C-2 Outlet Modification design, replacement of the damaged upstream gate at Pond B-5 with a smaller diameter gate, crest grading at Dams A-2, A-4, and the Landfill Dam. Dam inspections, with evaluation of all monitoring data, were performed in August 2005.

Storm water pollution prevention practices (silt fences, straw bales, mats, wattles, recontouring patterns, etc.) were implemented for various RFETS demolition projects to minimize storm water runoff, erosion, and sediment transport into the drainage system during the fourth quarter of FY05. The annual Comprehensive Site Compliance Evaluation report was completed during the fourth quarter of FY05.

##### 4.2 Surface Water Management

During the fourth quarter of FY05, Kaiser-Hill completed the following pond water transfers and discharges totaling 31.86 Million Gallons (MG), an decrease of 46% compared to the fourth quarter of FY04 (59.38 MG).

Pond A-4 water was discharged to North Walnut Creek (NWC) once during the fourth quarter from July 14 through July 21, 2005.

Pond A-3 activity included a pump transfer of approximately 0.37 MG to Pond B-5 from July 15 through July 21, 2005, and a discharge of approximately 4.32 MG through the outlet to Pond A-4 from July 21 through July 27, 2005.

Pond B-5 activity included a discharge to South Walnut Creek (SWC) totaling 2.75 MG from July 14 through July 21, 2005. Another discharge of approximately 1651 gallons to release water trapped in the pipe upstream of the downstream valve after repair of the upstream gate was completed and the downstream valve was opened occurred on September 1, 2005. Several pump transfers to Pond A-4 occurred, one of approximately 10.70 MG from July 6 through July 14, 2005, one of approximately 0.67 MG from July 21 through July 25, 2005, and one of approximately 3.91 MG from August 10 through August 22, 2005. For discharge into SWC, water-quality samples were collected and analyzed. Water-quality data met all requirements and all approvals; notifications were performed prior to the discharge to SWC. The City of Broomfield opted not to impound the Pond B-5 discharges within Great Western Reservoir.

Pond C-2 activity included a discharge to Woman Creek (WMC) of approximately 4.83 MG from July 1 through July 25, 2005, as well as another discharge of approximately 100 gallons on September 22, 2005 when the downstream valve was opened after installation of an upstream gate was completed.

There were no other internal pond transfers during the fourth quarter of FY05.

Transfers and discharges from the RFETS ponds during the fourth quarter of FY05 are summarized in Table 2.

**Table 2. RFETS Pond Water Transfers and Discharges - Fourth Quarter of FY05**

Dates	Pond Activity	Total MG	Mode
7/1 to 7/14	C-2 to WMC	4.83	Outlet valve direct discharge
7/6 to 7/14	B-5 to A-4	10.70	Pump transfer
7/14 to 7/21	B-5 to SWC	2.75	Pump transfer and direct discharge
7/14 to 7/21	A-4 to NWC	4.31	Outlet valve direct discharge
7/15 to 7/21	A-3 to B-5	0.37	Pump discharge
7/21 to 7/25	B-5 to A-4	0.67	Pump transfer
7/21 to 7/27	A-3 to A-4	4.32	Outlet valve direct discharge
9/1	B-5 to SWC	0.002	Outlet valve direct discharge
9/22	C-2 to WMC	0.0001	Outlet valve direct discharge
	<b>Total for Quarter</b>	<b>31.86 MG</b>	

#### 4.3 Surface Water Monitoring

During July through September of 2005, 28 composite samples were collected by the RFCA automated monitoring network and submitted for analysis.

Monitoring locations GS02, GS40, GS42, GS49, GS52, GS53, GS54, GS55, GS56, GS57, GS60, GS61a, SW091, and SW118 were removed during the fourth quarter of FY05. These locations

were removed due to Closure project activities or because drainage reconfiguration had eliminated flow to the location.

Reportable 30-day average values for plutonium (Pu) were observed for the period from June 9 through July 9, 2005 using validated data at Point of Evaluation (POE) GS10. A RFCA Notification was transmitted to DOE, EPA, and CDPHE on August 1, 2005. Updates to this reportable period were transmitted to DOE, EPA, and CDPHE on August 30 and October 3, 2005.

Reportable 30-day average values for uranium (U) were observed for the period from July 10 through August 3, 2005 using validated data at POE GS10. A RFCA Notification was transmitted to DOE, EPA, and CDPHE on August 15, 2005. An update to this reportable period was transmitted to DOE, EPA, and CDPHE on September 14, 2005.

A review of all analytical data available through October 3, 2005 showed that the 30-day moving average values for all other POE and Point of Compliance locations were under the RFCA action levels and standards framework for all monitored analytes.

#### **4.4 Groundwater Monitoring**

The Quarterly Information Exchange Meeting was convened on September 27, 2005. A subsequent Water Working Group meeting was held on October 4, 2005 to discuss the “state of water” at physical completion. The results of the Second (calendar) Quarter 2005 Groundwater Monitoring Report were presented at the meeting.

Other activities during the fourth quarter of FY05 included:

- Sampled 31 IMP and other wells. One hundred sixteen groundwater samples were shipped to off-site laboratories for analysis. Sampling of 1 additional well was attempted during the quarter but it was dry.
- Completion of the Well Abandonment and Replacement Program (WARP). Twenty-four wells were abandoned during the quarter, completing the 276 WARP wells scheduled for abandonment in FY05. Twenty replacement or new wells were installed during the quarter.